PATENT ABSTRACTS OF JAPAN

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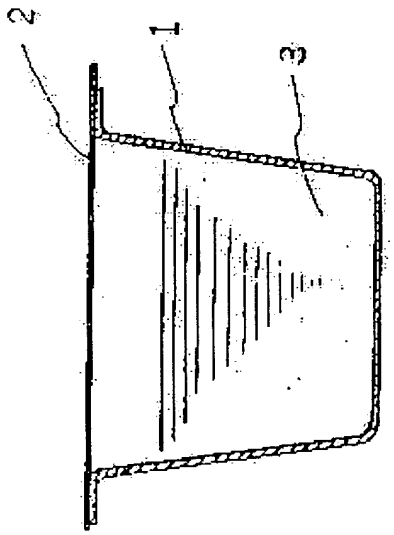
(51)Int.Cl. **C10L 7/04**

(21)Application number : **60-159799**
(22)Date of filing : **18.07.1985**

(71)Applicant : **OHASHI NORIO**
(72)Inventor : **OHASHI NORIO**

(54) ALCOHOLIC PORTABLE FUEL

(57)Abstract:
PURPOSE: A portable fuel, obtained by filling an alcoholic fuel in a cuplike container made of a resin containing an inorganic material mixed therein and sealing up the opening of the container, and capable of burning to the last with stable heating power without causing shape collapse on combustion nor flying away of fire.
CONSTITUTION: An alcoholic portable fuel obtained by filling an alcoholic gelatinized fuel or solid fuel 2 in a cuplike container 1 prepared by molding a resin material obtained by mixing an inorganic material, e.g. calcium carbonate or titanium white, with a polyolefin based resin, e.g. polyethylene (PE) or polypropylene (PP) and sealing up the opening of the container 1 with a plastic film 3.
EFFECT: Scarcely giving off offensive smell during combustion.



LEGAL STATUS

[Date of request for examination]

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[Date of final disposal for application]

[Patent number]

[Date of registration]

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FULL ESTIMATED COST	0.21	0.21

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FILE COVERS 1907 - 24 Jan 2003 VOL 138 ISS 5
FILE LAST UPDATED: 23 Jan 2003 (20030123/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> **s jp62020594**
L1 0 JP62020594

=> **s jp62020594/pn**
L2 1 JP62020594/PN

=> **d l2 all**

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS

Full Text | Citing References

AN 1987:141077 CAPLUS
DN 106:141077
TI Fuel briquets
IN Ohashi, Norio
PA Japan
SO Jpn. Kokai Tokkyo Koho, 2 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C10L007-04
CC 51-24 (Fossil Fuels, Derivatives, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	**JP 62020594**	**A2**	**19870129**	**JP 1985-159799**	**19850718**
PRAI	JP 1985-159799		19850718		

AB A method for manufg. cup-shaped fuel briquets comprises (a) mixing polyolefin resins (e.g., polyethylene) with an inorg. compd. (e.g., CaCO3) and extruding the mixt. to form a cup-shaped container, (b) filling the

container with a gelled-alc. fuel, and (c) covering and sealing the container with plastic films. The combustion time of the fuel briquets can be significantly increased and the flame contained no soot.

ST fuel briquet manuf gelled alc; soot formation alc fuel briquet

IT Soot
(formation of, reduced, from combustion of gelled alc.-contg. fuel briquets)

IT Alcohols, uses and miscellaneous
RL: USES (Uses)
(gelled, fuel briquets contg., for soot redn.)

IT Fuel briquets
(manuf. of, from gelled alcs., for soot redn.)

IT 471-34-1, Calcium carbonate (CaCO3), uses and miscellaneous 9002-88-4, Polyethylene
RL: USES (Uses)
(gelled alc.-based fuel briquets contg., for soot redn.)

=>

Exhibit A

⑲日本国特許庁(JP) ⑪特許出願公開
⑫公開特許公報(A) 昭62-20594

⑤Int.Cl.⁴ 識別記号 庁内整理番号 ④公開 昭和62年(1987)1月29日
C 10 L 7/04 7229-4H

審査請求 未請求 発明の数 1 (全2頁)

⑭発明の名称 アルコール系携帯燃料

⑪特願 昭60-159799
⑫出願 昭60(1985)7月18日

⑦発明者 大橋 典夫 大垣市本今町254番地の4
⑦出願人 大橋 典夫 大垣市本今町254番地の4

明細書

1．発明の名称 アルコール系携帯燃料

2．特許請求の範囲

炭酸カルシューム，チタンホワイト等の無機質材料をポリエチレン，ポリプロピレン等のポリオレフィン系樹脂に混合させてなる樹脂材料で成形したカップ状容器①に，アルコール系のゲル化燃料または固形燃料②を充填し，前記カップ状容器の開口をプラスチックフイルム③で密封シールしたことを特徴とするアルコール系携帯燃料。

3．発明の詳細な説明

［産業上の利用分野］

本発明は，レジャーやキャンプ等で使用するアルコール系携帯燃料の改良に関するもので，特にアルコール燃料と共に燃焼させる樹脂製容器の燃焼状態をきわめて良好なものにすることを目的としたものである。

［従来の技術］

今までに実用に供されたアルコール系携帯燃料は，樹脂製のパウチに充填したり，チューブや缶や金属缶に入れられ，このアルコール燃料を必要な量だけ分注して使用するということが行われている。

又，固形のアルコール系燃料についてはプラスチックフイルムで密封包装がされている。

［発明が解決しようとする問題点］

従来，アルコール燃料を樹脂製の容器に充填したものでは，容器が燃えるときに樹脂特有のいやな匂いが発生し，特に喫食時のような場合には好ましくないものであった。

又，樹脂製容器はいったん燃えだすとアルコール燃料より強く燃えるので飛び散ねを誘発したり，容器が先に燃えることにより，燃料がゲル状や液体の場合は燃焼面積が広がって急激に燃焼するようになり，燃焼状態が安定せず，一包装体当たりの燃焼時間がまちまちになるという問題があった。

［問題点を解決するための手段］

本発明は，炭酸カルシューム，チタンホワイト等の無機質材料をポリエチレン，ポリプロピレン等のポリオレフィン系樹脂に混合させてなる樹脂

材料で成形したカップ状容器①に、アルコール系のゲル化燃料または固形燃料②を充填し、前記カップ状容器の開口をポリオレフィン系フイルム③で密封シールしたことを特徴とするアルコール系携帯燃料である。

そして、本発明のカップ状容器①は、オレフィン系樹脂の特質の一つであるところの、燃えた時にあまりいやな匂いを出さないという性質をさらに改良するために、前記樹脂に20－50%の無機質を含有させたもので成形したから、燃やした時にほとんど匂いがでない。

又、前記容器は無機質を含有さたので耐熱性が向上し、アルコール燃料の蒸発熱で燃焼体の温度があまり上がらず、容器が先に燃焼しにくく、火の飛び跳ねをおこさずに安定して燃焼させることができる。

〔実施例1〕

炭酸カルシュウム50重量%を含有させたポリエチレンシートにより、30ccのカップ容器を真空成形で成形し、この容器にアルコール系ゲル化燃料を充填し、ポリエチレンフイルムで密封シールした。着火後20分間燃焼させたが、燃焼時のいやな匂いの発生はなく、火の飛び跳ねや容器の形崩れもなく最後まで安定した火力で燃焼させることができた。

〔実施例2〕

炭酸バリューム30重量%を含有させたポリプロピレンシートにより、30ccのカップ容器を真空成形で成形し、この容器にアルコール系固体燃料を充填し、ポリプロピレンフイルムで密封シールした。着火後20分間燃焼させたが、燃焼時のいやな匂いの発生はなく、火の飛び跳ねや容器の形崩れもなく最後まで安定した火力で燃焼させることができた。

〔実施例3〕

チタンホワイト20重量%を含有させたポリプロピレンシートにより、30ccのカップ容器を真空成形で成形し、この容器にアルコール系液体燃料を充填し、ポリプロピレンフイルムにポリエチレンテレフタレートフイルムをラミネートしたフイルムで密封シールした。着火後20分間燃焼させたが、燃焼時のいやな匂いの発生はなく、火の飛び跳ねや容器の形崩れもなく最後まで安定した火力で燃焼させることができた。

〔発明の効果〕

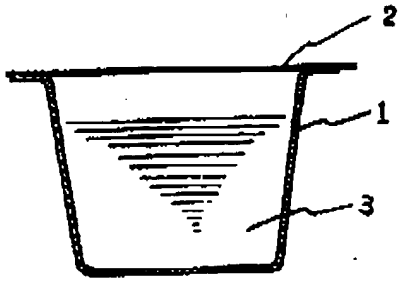
本発明は、アルコール系燃料の各種形態のものを収納する容器として、無機質材料をポリオレフィン系樹脂に混合させてなる樹脂材料でカップ状容器①を形成したものであるから、容器中に含有する無機質の燃焼力低減効果により、燃焼時に容器の形崩れを起こさず、火の飛び跳ねもなく最後まで安定した火力で燃料を燃やすことができ、又燃焼中にはいやな匂いをほとんど出さないという特長をもつもので、産業上極めて有益な発明である。

4．図面の簡単な説明

第1図は本発明の縦断正面図。

①はカップ状容器、②はアルコール系固体燃料、③はプラスチックフイルム。

第1図



特許出願人
大槻真夫

Exhibit B

[19] JAPAN PATENT [JP]

[12] Industrial Patent Gazette (A)

Internal reference number 7229-4H
[11] PCT Pub. No.: S 62-20594
[43] PCT Pub date: Jan 29, 1987 (S62)
[51] Int. Cl.[4] C 10 L 7/04
Request for examination: none
Number of invention: 1

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[54] Name of Invention: Portable ethanol fuel
[21] Appl. No.: S60-159799
[22] PCT filed: July 18, 1985 (S60)
[72] Inventor: Norio Ohashi
254-4 motoima-cho, Ohgaki-shi Gifu, 03-0932 Japan
[71] Applicant: Norio Ohashi
254-4 motoima-cho, Ohgaki-shi Gifu, 03-0932 Japan

Discription

1. Title of Invention: Portable Ethanol Fuel

2. Summary of the Invention:

Portable ethanol fuel which is composed of cup-shaped plastic container made from a mixture of polyolefin resin such as polyethylene of polypropyrene and inorganic material such as calcium carbonate or titanium oxide , filled with either gelated or solid ethanol fuel , and sealed with plastic film .

3. Detailed Discription of the Invention

[Field of Invention]

This invention is relevant to the improvement of portable fuel ethanol used for an occasion such as outdoor leisure or camping and it is focused on keeping the container which holds fuel and is burned together with fuel in good condition while burning.

[Background of the Invention]

Up to date, portable ethanol fuel in practical use has been packed in plastic pouch, in tube, in bottle or in can and users had to aliquot the fuel at their usage. In addition, solid ethanol fuel is sealed with plastic film.

[Object of the Invention]

Existing fuel ethanol packed in plastic container generates unpleasant odor while its burning which is not suitable for the occasion that the fuel is used. Furthermore, there was a disadvantage that once the plastic container ignite it burns vigorously than ethanol and it splashes flame and fuel, or it melts down as it burns so that in case of either liquid or gelated fuel ethanol, the fuel spreads as the container deforms, burning area increases and thus burning time per package was discrepant.

[Approach of the Invention]

This is an invention of portable ethanol fuel which is composed of cup-shaped plastic container made from a mixture of polyolefin resin such as polyethylene or polypropylene and inorganic material such as calcium carbonate or titanium oxide ①, filled with either gelated or solid ethanol fuel ②, and sealed with plastic film ⑤. The cup-shaped container ① is made from olefin resin which is less odor-generating material and to further refine this characteristic, inorganic material was added from 20 – 50 % to the resin. (Thus the container barely generates odor while burning.)
Furthermore, the inorganic material added to the resin reduces the combustibility of the container so that the container is more heat stable, less ignite. Therefore, the fuel ethanol burns stable and constant, not splashing.

[Embodiment 1]

Container which holds 30 cc was molded from polyethylene sheet containing 50% w/w of calcium carbonate, filled with gelated fuel ethanol and sealed with polyethylene film. This package was ignited and kept burning for 20 minute. During this period of time, there was no obvious odor generation, container was resistant to deformation and thus there was no splashing flame observed and the fuel burned constantly to the end.

[Embodiment 2]

30 cc cup-shaped container was molded from polypropylene sheet containing 30 % w/w of barium carbonate, filled with solid fuel ethanol and sealed with polypropylene film. This package was ignited and kept burning for 20 minute. There was no odor generation,

the container was resistant to deformation thus there was no flame splashing and the fuel burned constantly to the end.

[Embodiment 3]

30 cc cup-shaped container was molded from polypropylene sheet containing 20 % w/w titanium oxide, filled with liquid fuel ethanol and sealed with polyethylene film laminated with polyethylene-terephthalate film. This package was ignited and kept burning for 20 minute. Odor generation was not observed, the container was resistant to deformation thus no splashing flame was observed and the fuel burned constantly to the end.

[Impact of the Invention]

This invention is as to hold various form of fuel ethanol, an making of cup-shaped container made from plastic material consist from the mixture of inorganic material and polyolefin resin. Since the inorganic material included in the container reduces combustibility of the container, container became resistant to deformation and thus it does not splash flame nor fuel and the fuel burns constantly to the end. Furthermore, the container does not generate obvious odor during burning.
Therefore, this invention is industrially highly valuable.

4. Figure legend

Figure 1 is a drawing of longitudinal section of invented portal fuel package. Cup-shaped container ①, ethanol fuel ②*, and plastic film ③ *.
*Obviously those are numbered other way round.

Patent Applicant
Norio Ohashi

Exhibit C

Translator's Affidavit

I, KYOKO OKADA, hereby declare, under pains and penalties of perjury.

1. I am over 21 years of age.

2. My current address is:
10 Museum Way, #1926,
CAMBRIDGE, MA 02141.

3. I am proficient and fluent in both English and the Japanese language.

4. I translated the patent document JP 62-20594, a copy of which appears attached hereto as Exhibit A, producing the English version, which appears attached hereto as Exhibit B.

5. Exhibit B is a true and faithful translation of Exhibit A.

Signed, on JUNE 4, 2003 Kyoko Okada
Translator's Name

Middlesex, SS) Waltham, Massachusetts

On this date appeared before me Kyoko Okada, known to me, who declared that the above affidavit is her free act and deed.

Susan C. Mandel
June 4, 2003 (Notary)

my Commission expires on 2/7/08